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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,309	08/12/2008	Joerg Bredno	DE 040065	2583

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EXAMINER

LY, CHEYNE D

ART UNIT	PAPER NUMBER
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2168

NOTIFICATION DATE	DELIVERY MODE
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04/07/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/598,309	BREDNO, JOERG	
	Examiner	Art Unit	
	CHEYNE D. LY	2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on February 01, 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's arguments filed February 01, 2011 have been fully considered but they are not persuasive.
2. The 35 USC § 101 has been withdrawn as necessitated by the claim amendment.
3. On page 5, Applicant asserts that the disclosure on pages 3, lines 15-31 and 5, lines 12-20, explain that the user decides whether or not to select either these options and with the amendment the 35 USC § 112 has been overcome. It is noted that the pointed to section of the specification merely reiterates the claimed limitation with an example, however, the limitations remain vague and indefinite because the claims remain unclear as to what criteria being utilized to determine a "distrust selection option" or "trust selection option." Therefore, the metes and bound of the claims is not clear.
4. On pages 6-7, Applicant argues "there is not disclosure by Biswal or Jesmanowicz that the fMRI parameter is adjusted on the basis of an input." Applicant's argument is not persuasive because Biswal discloses the argued limitation as discussed below. It is noted that the argued limitation is directed to a generic "input." Therefore, any processing that receives data would reasonably described the argued limitation of "an input." For example, Biswal discloses in order to calculate the confidence intervals a loop is entered in which a 90 element voxel vector is selected...A second loop is then entered...in which 85 elements are randomly selected from this voxel vector. The fMRI image is modified using the calculated confidence intervals (column 8, lines 9-67) which reasoning describes argued adjusting and reprocessing the fMRI as required by the claims.
5. Claims 1-8 are examined on the merits.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 3 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. The limitation of "distrust selection option" is recited claim 3, line 2, and "trust selection option" in claim 4, line 2, cause said claim to be vague and indefinite because it is not clear as to what criteria being utilized to determine a "distrust selection option" or "trust selection option." Therefore, the metes and bound of the claims is not clear.

9. The subject matter encompassed by the claims must be reasonably understood without resort to speculation. Presently, speculation and conjecture must be utilized by us and by the artisan inasmuch as the claims on appeal do not adequately reflect what the disclosed invention is. Note *In re Steele*, 305 F.2d 859, 862 (CCPA 1962) (A prior art rejection cannot be sustained if the hypothetical person of ordinary skill in the art would have to make speculative assumptions concerning the meaning of claim language.); Note also *In re Wilson*, 424 F.2d 1382, 1385 (CCPA 1970).

CLAIM REJECTIONS - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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11. Claims 1, 2, and 5-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Biswal et al. (Biswal hereafter, US 6,477,399 B2).

12. The citation of Jesmanowicz et al. ('322 hereafter) has been cited as incorporated by reference by Biswal (column 2, lines 26-38, e.g. For a more detailed description of the preferred correlation method, reference is made to the above-cited U.S. Pat. No. 5,603,322 which is incorporated herein by reference. The correlation magnitudes that result are scaled to a range of 0 to 1.0. These correlation values may be used to modulate the brightness or color of pixels as described above to indicate brain activity. The present invention is an improvement in which the confidence level is calculated for the correlation values before they are used to indicate brain activity).

13. In regard to claim 1, Biswal discloses a method of computer-aided extraction of quantitative information, the method comprising the steps of:

14. acquiring primary data from an object to be examined (column 2, line 28, e.g. acquiring an fMRI data set);

15. processing the primary data on the basis of a primary parameter set to determine a primary result (column 2, lines 30-35, e.g. fMRI parameter);

16. determining a confidence interval with respect to the primary result (column 2, lines 30-35, e.g. confidence level);

17. displaying the primary result and the confidence interval (column 4, lines 62-67, e.g. confidence level numbers may simply be displayed along with an indication of their associated fMRI image voxels);

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18. adjusting the primary parameter set on the basis of an input (column 3, lines 1-18, e.g. neurologist may input a reference pattern or select as a reference pattern the time varying NMR data for one voxel which is observed to follow the selected stimulation pattern. The degree of correlation between the selected reference pattern and the time varying NMR signals for each of the other voxels in the MRI data set is then calculated and the results displayed as a brain function image. In voxel locations where the correlation is high, brain activity is high and where it is low there is little or no correlation. The resulting brain function image may be superimposed on the anatomical image as variations in brightness or color);

19. reprocessing the primary data on the basis of the adjusted primary parameter set to determine a secondary result; and displaying the secondary result (column 3, lines 1-18, e.g. neurologist may input a reference pattern or select as a reference pattern the time varying NMR data for one voxel which is observed to follow the selected stimulation pattern. The degree of correlation between the selected reference pattern and the time varying NMR signals for each of the other voxels in the MRI data set is then calculated and the results displayed as a brain function image. In voxel locations where the correlation is high, brain activity is high and where it is low there is little or no correlation. The resulting brain function image may be superimposed on the anatomical image as variations in brightness or color).

20. In regard to claim 2, Biswal discloses the primary parameter set comprises a plurality of parameters (column 2, lines 30-35, e.g. fMRI parameter);

21. varying at least one parameter of the primary parameter set (column 3, lines 1-18, e.g. neurologist may input a reference pattern or select as a reference pattern the time varying NMR data for one voxel which is observed to follow the selected stimulation pattern. The degree of

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correlation between the selected reference pattern and the time varying NMR signals for each of the other voxels in the MRI data set is then calculated and the results displayed as a brain function image. In voxel locations where the correlation is high, brain activity is high and where it is low there is little or no correlation. The resulting brain function image may be superimposed on the anatomical image as variations in brightness or color);

22. adjusting the primary parameter set on the basis of the at least one parameter which is varied (column 3, lines 1-18, e.g. neurologist may input a reference pattern or select as a reference pattern the time varying NMR data for one voxel which is observed to follow the selected stimulation pattern. The degree of correlation between the selected reference pattern and the time varying NMR signals for each of the other voxels in the MRI data set is then calculated and the results displayed as a brain function image. In voxel locations where the correlation is high, brain activity is high and where it is low there is little or no correlation. The resulting brain function image may be superimposed on the anatomical image as variations in brightness or color); and

23. interactively reprocessing the primary data on the basis of the adjusted parameter set to determine the secondary result and displaying the secondary result (column 3, lines 1-18, e.g. neurologist may input a reference pattern or select as a reference pattern the time varying NMR data for one voxel which is observed to follow the selected stimulation pattern. The degree of correlation between the selected reference pattern and the time varying NMR signals for each of the other voxels in the MRI data set is then calculated and the results displayed as a brain function image. In voxel locations where the correlation is high, brain activity is high and where

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it is low there is little or no correlation. The resulting brain function image may be superimposed on the anatomical image as variations in brightness or color).

24. In regard to claim 5, Biswal discloses 5, comparing the primary diagnostic data to secondary data; deciding whether the primary data is comparable to any of the secondary data; reprocessing the primary data on the basis of a secondary parameter set belonging to similar secondary data to determine a tertiary result; and displaying the tertiary result (column 3, lines 1-18, e.g. neurologist may input a reference pattern or select as a reference pattern the time varying NMR data for one voxel which is observed to follow the selected stimulation pattern. The degree of correlation between the selected reference pattern and the time varying NMR signals for each of the other voxels in the MRI data set is then calculated and the results displayed as a brain function image. In voxel locations where the correlation is high, brain activity is high and where it is low there is little or no correlation. The resulting brain function image may be superimposed on the anatomical image as variations in brightness or color).

25. In regard to claim 6, Biswal discloses, the method allows for an explorative determination of a dependability of at least one of the primary and secondary results (column 2, lines 30-35, e.g. confidence level).

26. In regard to claims 7 and 8, Biswal discloses a data processing device and program (column 5, lines 35-44, e.g. Tesla MRI system) for implementing the above cited method.

CONCLUSION

27. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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28. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

29. Patent applicants with problems or questions regarding electronic images that can be viewed in the Patent Application Information Retrieval system (PAIR) can now contact the USPTO's Patent Electronic Business Center (Patent EBC) for assistance. Representatives are available to answer your questions daily from 6 am to midnight (EST). The toll free number is (866) 217-9197. When calling please have your application serial or patent number, the type of document you are having an image problem with, the number of pages and the specific nature of the problem. The Patent Electronic Business Center will notify applicants of the resolution of the problem within 5-7 business days. Applicants can also check PAIR to confirm that the problem has been corrected. The USPTO's Patent Electronic Business Center is a complete service center supporting all patent business on the Internet. The USPTO's PAIR system provides Internet-based access to patent application status and history information. It also enables applicants to view the scanned images of their own application file folder(s) as well as general patent information available to the public.

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30. For all other customer support, please call the USPTO Call Center (UCC) at 800-786-9199. The USPTO's official fax number is 571-272-8300.

31. Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. Dune Ly, whose telephone number is (571) 272-0716. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

32. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim Vo, can be reached on (571)272-3642.

/Cheyne D Ly/

Primary Examiner, Art Unit 2168